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WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) ONE LIBERTY PLACE - 46TH FLOOR PHILADELPHIA, PA 19103				
			EXAMINER TODD, GREGORY G	
			ART UNIT 2157	PAPER NUMBER
DATE MAILED: 12/16/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/681,309

Applicant(s)

KENNAMER ET AL.

Examiner

Gregory G. Todd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. This is a fourth office action in response to applicant's amendment filed, 22 September 2005, of application filed, with the above serial number, on 16 March 2001 in which claims 1, 6, 10, 15, and 19 have been amended. Claims 1-21 are therefore pending in the application.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Le et al (hereinafter "Le", 6,145,089).

Le teaches the invention as claimed including server fail-over recovery (see abstract).

As per Claim 1, Le teaches a system comprising:

a plurality of servers, wherein one or more failover group of servers is selected from the plurality of servers, and over which data is partitioned, each server usually processing client requests for data of a respective type and processing the client

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requests for data other than the respective type for other of the plurality of servers within a same failover group when the other of the plurality of servers within the same failover group are offline (at least col. 3, lines 21-22; col. 2, lines 22-64; servers providing different services, redistributing services to other servers upon failure); and,

a master server managing notifications from one or more clients and from the plurality of servers as to whether servers are offline, the master server verifying whether a server is offline when so notified, and where the server has been verified as offline, so notifying the plurality of servers other than the server that has been verified as offline (at least col. 4, lines 10-36; role manager managing heartbeat messages / server status).

As per Claim 2.

Le teaches the system of claim 1, further comprising a database storing data responsive to client requests of any respective type and which has been partitioned over the plurality of servers, each server caching the data stored in the database responsive to client requests of the respective type (at least col. 2, lines 21-63; failover server redistribution of service groups).

As per Claim 3.

Le teaches the system of claim 2, wherein each server further temporarily caches the data stored in the database responsive to client requests other than the respective type when the other of the plurality of servers within the same failover group are offline (at least col. 2, lines 21-63; failover server redistribution of service groups).

As per Claims 4 and 8.

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Le teaches the system of claim 1, wherein the one or more failover groups consists of one failover group, such that the plurality of servers are within the one failover group (at least col. 3 line 64 - col. 4 line 35).

As per Claims 5 and 9.

Le teaches the system of claim 1, further comprising one or more clients sending requests to the plurality of servers (at least col. 3, lines 47-67).

As per Claim 6, Le teaches a system comprising:

a plurality of servers, wherein one or more failover group of servers is selected from the plurality of servers, each server usually processing client requests of a respective type and processing the client requests other than the respective type for other of the plurality of servers within a same failover group when the other of the plurality of servers within the same failover group are offline (at least col. 3, lines 21-22; col. 2, lines 22-64; servers providing different services, redistributing services to other servers upon failure); and,

a database storing data responsive to client requests of any respective type and which is partitioned for caching over the plurality of servers, each server caching the data stored in the database responsive to client requests of the respective type, each server also temporarily caching the data stored in the database responsive to client requests other than the respective type when the other of the plurality of servers within the same failover group are offline (at least col. 2, lines 21-63; failover server redistribution of service groups).

As per Claim 7.

Le teaches the system of claim 6, further comprising a master server managing notifications from one or more clients and from the plurality of servers as to whether servers are offline, the master server verifying whether a server is offline when so notified, and where the server has been verified as offline, so notifying the plurality of servers other than the server that has been verified as offline (at least col. 4, lines 10-36; role manager managing heartbeat messages / server status).

As per Claim 10, Le teaches a computer-readable medium having instructions stored thereon for execution by a processor to perform a method, wherein Le teaches:

determining whether a data server is in a failover mode (at least col. 4, lines 30-35);

in response to determining that the data server is not in the failover mode, sending a request to the data server (at least col. 4, lines 1-13; receiving healthy heartbeat signal);

determining whether sending the request was successful (disruption determination) (at least col. 4, lines 10-36; col. 2, lines 37-63);

in response to determining that sending the request was unsuccessful, entering the failover mode for the data server (at least col. 4, lines 10-50; col. 2, lines 37-63);

notifying a master server that sending the request to one of a plurality of data servers was unsuccessful (role manager not receiving heartbeat message) (at least col. 4, lines 10-36);

determining a failover server, in a failover group, wherein the failover group is selected from a plurality of servers (elected server) (at least col. 2, lines 37-63); and,

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sending the request to the failover server, capable of processing requests for partitioned data of a respective type and partitioned data other than its respective type (eg. client accessing intranet through elected failover Server A after failure of Server C) (at least col. 2, lines 22-63; col. 3, lines 21-22) .

As per Claim 11.

Le teaches the medium of claim 10, the method initially comprising determining the data server as one of a plurality of data servers to which to send the request (eg. accessing intranet web server or customer support) (at least col. 2, lines 23-55).

As per Claim 12.

Le teaches the medium of claim 10, the method initially comprising in response to determining that sending the request was unsuccessful, repeating sending the request to the data server for a predetermined number of times, and entering the failover mode for the data server if sending the request for the predetermined number of times was still unsuccessful (at least col. 4, lines 27-36; col. 6, lines 30-36).

As per Claim 13.

Le teaches the medium of claim 10, the method further comprising in response to determining that the data server is in the failover mode, determining whether the data server has been in the failover mode for longer than a predetermined length of time (at least col. 4, lines 27-36; col. 6, lines 30-36); and,

in response to determining that the data server has not been in the failover mode for longer than the predetermined length of time, sending the request to the failover

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server (receiving heartbeat message within amount of time) (at least col. 4, lines 27-36; col. 6, lines 30-36).

As per Claim 14.

Le teaches the medium of claim 13, the method further comprising in response to determining that the data server has been in the failover mode for longer than the predetermined length of time, sending the request to the one of the plurality of data servers (sending to elected server after time-out) (at least col. 4, lines 27-36; col. 6, lines 30-36);

determining whether sending the request was successful (at least col. 4, lines 27-36; col. 6, lines 30-36);

in response to determining that sending the request was unsuccessful, sending the request to the failover server (at least col. 4, lines 27-36; col. 6, lines 30-36);

in response to determining that sending the request was successful, exiting the failover mode for the data server (at least col. 4, lines 27-36; col. 6, lines 30-36); and,

notifying the master server that sending the request to the data server was successful (reception of heartbeat message from each server resulting in no disruption) (at least col. 4, lines 15-51; col. 6, lines 30-36).

As per Claims 15 and 18, Le teaches a method and computer-readable medium having instructions stored thereon for performance by a server configured in a failover group, wherein the failover group is selected from a plurality of servers, wherein Le teaches:



receiving a request from a client (at least col. 2, lines 37-63; col. 3, lines 47-67;  
eg. accessing intranet web server or customer support);

determining whether the request is of a type usually processed by the server (at  
least col. 2, lines 22-63; eg. intranet);

in response to determining that the request is of the type usually processed by  
the server, processing the request (at least col. 2, lines 22-63; eg. accessing intranet  
web server 123 on Server C);

in response to determining that the request is not of the type usually processed  
by the server, determining whether a second server that usually processes the type of  
the request is indicated as offline (at least col. 2, lines 22-63; col. 4 line 61 - col. 5 line  
50)

in response to determining that the second server that usually processes the type  
of the request is indicated as offline, processing the request (at least col. 2, lines 22-63;  
col. 4 line 61 - col. 5 line 50);

in response to determining that the second server that usually processes the type  
of the request is not indicated as offline, sending the request to the second server (at  
least col. 2, lines 22-63; col. 4 line 61 - col. 5 line 50);

in response to determining that sending the request was unsuccessful,  
processing the request (at least col. 2, lines 22-63; col. 4 line 61 - col. 5 line 50; kernel  
acting with heartbeat manager to elect one proper server to perform the services  
requested); and,

notifying a master server that the second server is offline (at least col. 4, lines 10-35; role manager sending heartbeat message / electing servers) .

As per Claim 16.

Le teaches the method of claim 15, further comprising receiving indication from a master server that the second server is online (at least col. 4, lines 10-50; heartbeat message status).

As per Claim 17.

Le teaches the method of claim 15, further comprising receiving indication from a master server that the second server is offline (at least col. 4, lines 10-50; heartbeat message status).

As per Claim 19, Le teaches a machine-readable medium having instructions stored thereon for execution by a processor of a master server to perform a method comprising:

receiving a notification that a server may be offline (at least col. 4, lines 10-50; eg. no heartbeat message);

contacting the server (at least col. 4, lines 10-50);

determining whether contacting the server was successful (at least col. 4, lines 10-50);

in response to determining that contacting the server was unsuccessful, marking the server as offline ((at least col. 4, lines 1-51; not connecting via the first heartbeat network and attempting on the second heartbeat network); and;

notifying a failover group of servers selected from a plurality of servers, wherein the failover group is capable of processing requests for partitioned data of a respective type and partitioned data other than its respective type, other than the server marked as offline that the server is offline (at least col. 4, lines 10-50; col. 3, lines 21-22; col. 2, lines 22-64; servers providing different services, redistributing services to other servers upon failure heartbeat message status with election of services).

As per Claim 20.

Le teaches the medium of claim 19, the method further comprising periodically checking the server that has been marked as offline to determine whether the server is back online (at least col. 4, lines 1-51; col. 5, lines 29-45; receiving updates and heartbeat messages from servers).

As per Claim 21,

Le teaches the medium of claim 20, wherein periodically checking the server that has been marked as offline comprising:

contacting the server (at least col. 6 line 47 - col. 7 line 30; role manager and service manager staying offline until recovery and transitioning online);

determining whether contacting the server was successful (at least col. 6 line 47 - col. 7 line 30; role manager and service manager staying offline until recovery and transitioning online);

in response to determining that contacting the server was successful, marking the server as online (at least col. 6 line 47 - col. 7 line 30; role manager and service manager staying offline until recovery and transitioning online); and,

notifying the plurality of servers other than the server marked as online that the server is online (at least col. 6 line 47 - col. 7 line 30; role manager and service manager staying offline until recovery and transitioning online / using heartbeat messages).

### ***Response to Arguments***

4. Applicant's arguments filed 22 September 2005 have been fully considered but they are not persuasive.

Applicants argue, substantially, that Le fails to teach elements of the independent claims, as amended, including, one or more failover group of servers being selected from the plurality of servers.

Examiner would again like to thank Applicant for the telephone interview of 07 September 2005, in which these arguments were presented. However, as recorded in the Interview Summary of 13 September 2005, Le teaches a plurality of servers (eg. server A, B, C), in this case the 3 servers belonging to a single group of servers, all of which belonging to the same 'failover group'. Wherein, when a single one of these servers fail, for example A, the services offered by that server are split up amongst the rest of the 'group', namely, B and C in an election and priority fashion. Thus, while being a 'service group', the functionality is identical to a 'failover group', wherein when a server in the group fails, those services are picked up by others in the group. And while Le may only teach one group and not multiple groups, the amendments to the claims have not changed this limitation as the limitation still reads as being **one or more**. Thus,

Applicants amendments to the claims have not overcome Le. Further, previously cited Delaney et al USPN 5,996,086, teaches failover server groups in much detail.

In response to applicant's arguments, the recitation of selecting a server in a failover group, wherein the failover group is selected from a plurality of servers has not been given patentable weight because the recitation occurs in the preamble of claim 15/18. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Examiner reiterates that, as previously noted, the independent claims teach servers handling requests for data of a certain type (it is noted at least dependent claims 2 and 3 teach the data being cached to the server from a database); however, the response of 14 March 2005 suggests the data is stored and can be changed and uploaded on the servers themselves. In such a case, the specification does not clearly describe how data that is changed or added is distributed back to the database should such a failure occur at the time, thus the failover server could not be able to access that particular data as the data is on the original server which can no longer be accessed. Thus, there would be no enablement for such features in the specification if Applicant continues with this argument. Applicants have not yet responded to this argument.

**Conclusion**

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Previously cited Harvell, Arora et al, Bruck et al, Ishida (master computer management), Murphy et al (object-level failover specifics), Purcell et al (failover with heartbeat network), Glenn, II et al, Delaney et al, Hemphill et al, Rizvi et al, Abramson et al, Schoenthal et al, and Nguyen et al are cited for disclosing pertinent information related to the claimed invention. Applicants are requested to consider the prior art reference for relevant teachings when responding to this office action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory G. Todd whose telephone number is (571)272-4011. The examiner can normally be reached on Monday - Friday 9:00am-6:00pm w/ first Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory Todd



Patent Examiner

Technology Center 2100

  
**ABDULLAH SALAD**  
**PRIMARY EXAMINER**